



Public Notice

U.S. Army Corps
of Engineers
Pittsburgh District

In Reply Refer to
Notice No. below

US Army Corps of Engineers, Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Application No. 2007-1062

Date: September 5, 2007

Notice No. 07-39

Closing Date: September 28, 2007

1. TO ALL WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (33 U.S.C. 1344).
2. APPLICANT: Department of Interior
United States Fish and Wildlife Service
Ohio River Islands National Wildlife Refuge
3982 Waverly Road
Williamson, West Virginia 26187
3. LOCATION: along the banks of Phillis Island, River Mile 35.4 and Georgetown Island, River Mile 37.8, Ohio River, Beaver County, Pennsylvania.
4. PURPOSE AND DESCRIPTION OF WORK: The applicant is proposing to rehabilitate and protect Phillis and Georgetown Islands. Stone longitudinal dikes will be installed on portions of the navigation and backchannel sides of the islands. Contaminant free, suitable dredged material composed primarily of cobble and gravel will be used to backfill behind the dikes. This project will impact 1 acre of water. No wetlands will be impacted. The dredged material will be obtained from the US Army Corps of Engineers' Emsworth Dams Rehabilitation Project. Drawings of the proposed project are attached to this notice.
5. ENCROACHMENT PERMIT: The applicant is required to obtain a State 401 Water Quality Certification from the:

Pennsylvania Department of Environmental Protection
Southwest Regional Office
Soils and Waterways Section
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222-4745
Telephone: 412-442-4000

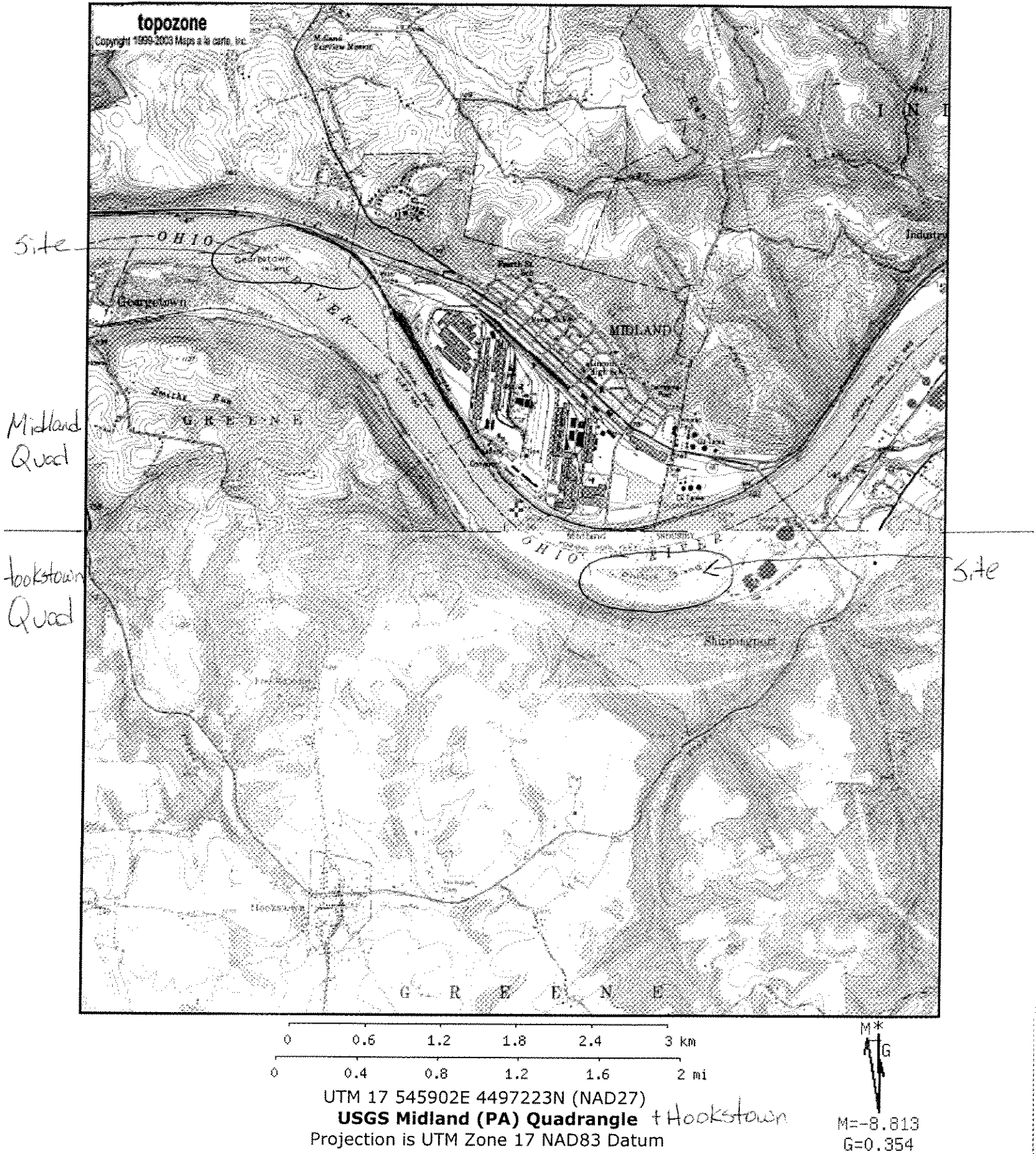
6. IMPACT ON NATURAL RESOURCES: A mussel survey must be completed and a determination of effect will be made prior to issuance of a permit. This Public Notice serves as a request to the U. S. Fish and Wildlife Service for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).
7. IMPACT ON CULTURAL RESOURCES: The National Register of Historic Places has been consulted, and it has been determined that there are no properties currently listed on the register which would be directly affected by the proposed work. If we are made aware, as a result of comments received in response to this notice, or by other means, of specific archeological, scientific, prehistorical, or historical sites or structures which might be affected by the proposed work, the District Engineer will immediately take the appropriate action necessary pursuant to the National Historic Preservation Act of 1966 - Public Law 89-665 as amended (including Public Law 96-515).
8. PUBLIC INVOLVEMENT: Any person may request, in writing, within the comment period specified in the paragraph below entitled "RESPONSES," that a public hearing be held to consider this application. The requests for public hearing shall state, with particularity, the reasons for holding a public hearing.
9. EVALUATION: Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposals must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the overall public interest of the proposed activity. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator,

Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

10. RESPONSES: A permit will be granted unless its issuance is found to be contrary to the public interest. Written statements concerning the proposed activity should be received in this office on or before the closing date of this Public Notice in order to become a part of the record and to be considered in the final determination. Any objections which are received during this period may be forwarded to the applicant for possible resolution before the determination is made whether to issue or deny the requested DA Permit. All responses to this notice should be directed to the Regulatory Branch, attn Nancy Mullen, at the above address, by telephoning (412) 395-7170, or by e-mail at Nancy.J.Mullen@lrp02.usace.army.mil. Please refer to CELRP-OP-F 2007-1062 in all responses.

FOR THE DISTRICT ENGINEER:

//SIGNED//
Scott A. Hans
Acting Chief, Regulatory Branch

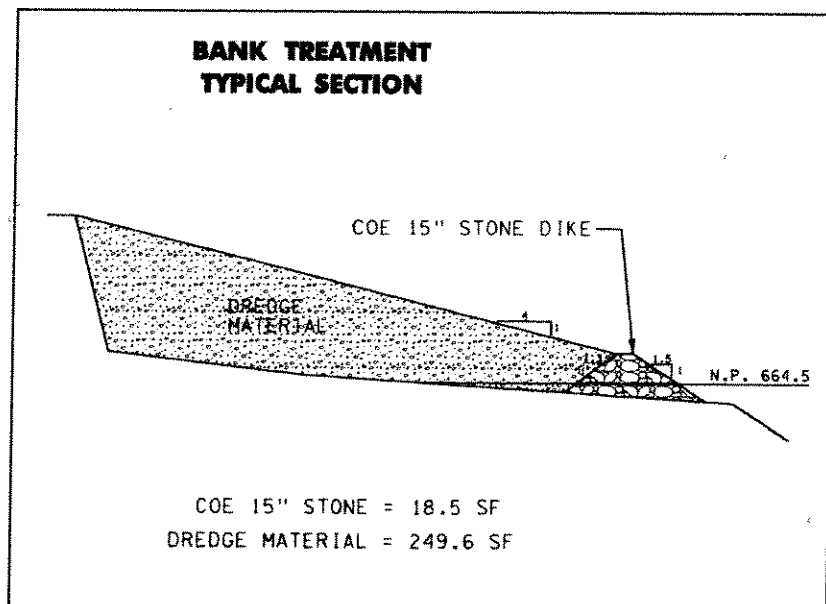


USFWS
Phillis Island
Bank Protection and Restoration

The project would extend from the toe of Phillis Island 1150 ft. upriver along the main channel. The back channel reach would begin about 100 ft. upriver from the toe of the island and extend upriver 750 ft. The island is located at Ohio River Mile 35.4. The project, to protect the island, includes a ring dike at the toe of the island, two stone longitudinal dikes, tiebacks, transitions, fill placement and re-vegetation. Since a wide bench extends along the island bank, a toe of dike key would not be required to protect this structure from inchannel failure and erosional processes and launching. The dike would extend from approximately 1 ft. below 664.5 MSL (New Cumberland L/D Pool) to a crest elevation of 666.5 MSL along both the main channel and back channel reaches. The stone dikes would be constructed of graded limestone placed to a 1v:1.5h channelward slope with a 2 ft. wide crest and a landward slope of 1v/1.3h. Up and down river transitions and tiebacks, would be constructed at approximately slope geometries of 1v/1.5h. The tiebacks would be constructed perpendicular to the dike and the enclosed interior areas filled with dredge material. The transitions would be angled at approximately 45 degrees to effect a smooth connection to stable island banks. The dredge material would be placed at a 1v/4h slope from the dike crest to the top of the bank. This fill would be contained by dike components and stabilized with native grass cover. Material requirements to construct this project are listed in Table 1.

Table 1: Material Requirements

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
Stone	3800	Ton
Dredge Material	25,000	CY
Temp. Ground Cover	1.54	ACRE

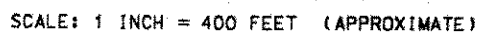


SCALE: 1 INCH = 10 FEET

NOTES:

1. DIKE OFFSET FROM ISLAND BANK IS APPROXIMATE AND IS DEFINED BY A SHALLOW WATER BENCH.
2. DREDGE MATERIAL CONSISTS OF SAND WITH SOME GRAVEL AND COBBLES.
3. SITE PLAN SHOWN ON AERIAL PHOTOGRAPHIC IMAGE FROM EARTH.GOOGLE.COM MOST RECENT AVAILABLE TOPOGRAPHIC MAPPING IS DATED 1961.

Phillis Island



Phillis Island

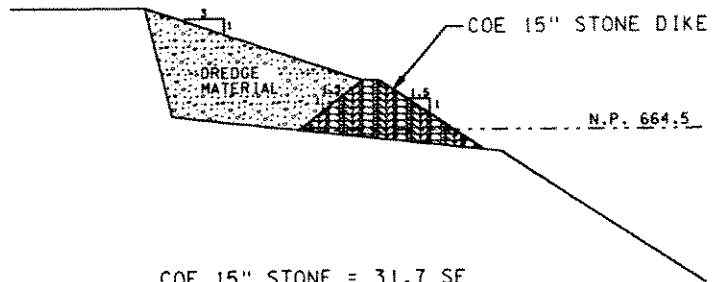
USFWS
Georgetown Island
Bank Protection and Restoration

The project would extend from the head of Georgetown Island 600 ft. downriver along the main channel and then extending upriver 800 ft. along the back channel from the toe of the island. The Island is located at Ohio River Mile 37.8. The project, to protect the Island, includes a stone ring dike at the toe of the island, two stone longitudinal dikes, tiebacks, transitions, fill placement and re-vegetation. Since a wide bench extends along this Island reach of Ohio River main channel bank, a toe of dike key would not be required to protect this structure from inchannel failure and erosional processes and launching. The dike would extend from approximately 3 ft. below 664.5 MSL (New Cumberland L/D Pool) to a crest elevation of 666.5 MSL along the main channel reach and 1.5 ft. below 664.5 MSL (New Cumberland L/D Pool) to a crest elevation of 666.5 MSL along the backchannel reach. The stone dikes would be constructed of graded limestone placed to a 1v:1.5h channelward slope with a 2 ft. wide crest and a landward slope of 1v:1.3h. Up and down river transitions and tiebacks, would be constructed at slope geometries of approximately 1v:1.5h. The tiebacks would be constructed perpendicular to the dike and the enclosed areas would be filled with dredge material. The transitions would be angled at approximately 45 degrees to effect a smooth connection to stable island banks. The dredge material would be placed at 1v:3h and 1v:5h slopes from the dike crest to the top of the bank. This fill would be contained by dike components and stabilized with native grass cover. Material requirements to construct this project are listed in Table 1.

Table 1: Material Requirements

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>
Stone	2600	Ton
Dredge Material	20,000	CY
Temp. Ground Cover	1.35	ACRE

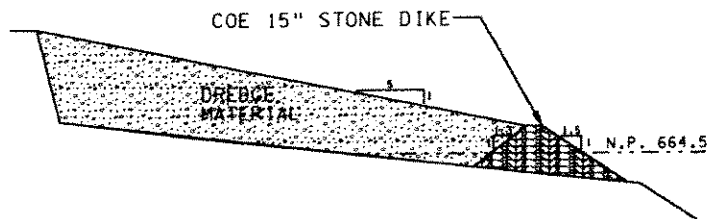
BACKCHANNEL TREATMENT TYPICAL SECTION



COE 15" STONE = 31.7 SF
DREDGE MATERIAL = 78.7 SF

SCALE: 1 INCH = 10 FEET

MAIN CHANNEL TREATMENT TYPICAL SECTION

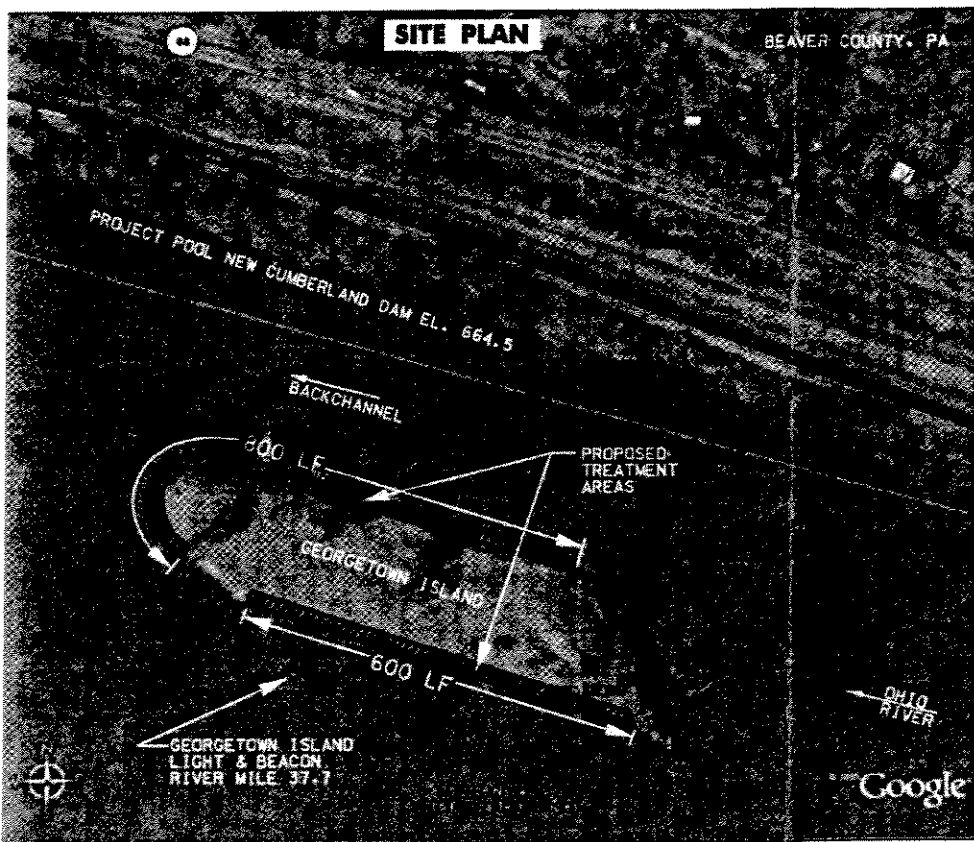


COE 15" STONE = 21.7 SF
DREDGE MATERIAL = 168.3 SF

SCALE: 1 INCH = 10 FEET

Georgetown Island

U.S. Army Corps
of Engineers
Washington, D.C.



SCALE: 1 INCH = 200 FEET (APPROXIMATE)

NOTES:

1. DIKE OFFSET FROM ISLAND BANK IS APPROXIMATE AND IS DEPENDENT AND DEFINED BY A SHALLOW WATER BENCH.
2. DREDGE MATERIAL CONSISTS OF SAND WITH SOME GRAVEL AND COBBLES.
3. SITE PLAN SHOWN ON AERIAL PHOTOGRAPHIC IMAGE FROM EARTH.GOOGLE.COM. MOST RECENT AVAILABLE TOPOGRAPHIC MAPPING IS DATED 1961.

Georgetown Island

Author	Year	Country	Sample Size	Sample Type	Study Design	Intervention	Outcome	Conclusion
1. Smith et al.	2015	USA	1,200	Adults	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
2. Jones et al.	2016	UK	800	Healthcare workers	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
3. Brown et al.	2017	Canada	500	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
4. White et al.	2018	Australia	300	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
5. Black et al.	2019	Germany	1,500	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
6. Green et al.	2020	France	900	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
7. Grey et al.	2021	Italy	600	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
8. White et al.	2022	USA	400	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
9. Black et al.	2023	UK	1,100	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
10. Brown et al.	2024	Canada	700	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
11. Green et al.	2025	Australia	500	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
12. Grey et al.	2026	Germany	300	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
13. White et al.	2027	France	1,300	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
14. Black et al.	2028	Italy	900	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
15. Brown et al.	2029	USA	600	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
16. Green et al.	2030	UK	400	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
17. Grey et al.	2031	Canada	1,400	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
18. White et al.	2032	Australia	800	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
19. Black et al.	2033	Germany	500	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
20. Brown et al.	2034	France	300	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
21. Green et al.	2035	Italy	1,200	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
22. Grey et al.	2036	USA	900	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
23. White et al.	2037	UK	600	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
24. Black et al.	2038	Canada	400	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
25. Brown et al.	2039	Australia	1,300	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
26. Green et al.	2040	Germany	800	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
27. Grey et al.	2041	France	500	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
28. White et al.	2042	Italy	300	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
29. Black et al.	2043	USA	1,400	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
30. Brown et al.	2044	UK	900	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
31. Green et al.	2045	Canada	600	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
32. Grey et al.	2046	Australia	400	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
33. White et al.	2047	Germany	1,500	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
34. Black et al.	2048	France	800	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
35. Brown et al.	2049	Italy	500	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
36. Green et al.	2050	USA	300	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.
37. Grey et al.	2051	UK	1,300	Healthcare workers	Randomized Controlled Trial	Hand hygiene training	Reduced hand hygiene compliance	Hand hygiene training is effective in reducing hand hygiene compliance in healthcare workers.
38. White et al.	2052	Canada	900	Adults	Quasi-experimental	Antibiotic stewardship program	Increased antibiotic resistance	Antibiotic stewardship programs are effective in reducing antibiotic resistance in healthcare settings.
39. Black et al.	2053	Australia	600	Children	Cohort Study	Vaccination	Increased vaccination rates	Vaccination is effective in reducing the risk of infectious diseases in children.
40. Brown et al.	2054	Germany	400	Adults	Case-control	Antibiotic use	Increased antibiotic resistance	Antibiotic use is associated with increased antibiotic resistance in adults.

Completed by _____	Date _____	Signature _____
Done by _____	Date _____	Signature _____
Reviewed by _____	Date _____	Signature _____
Submitted by _____	Date _____	Signature _____

CELESTIAL MECHANICS AND RING PROTECTION PROBLEMS AND TYPICAL SOLUTIONS

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